# REMARKS/ARGUMENTS

Claims 1-20 were pending in the present application. By virtue of this response, Claim 17 is cancelled and Claims 1-6, 9, 11-15, and 18-20 amended. Accordingly, Claims 1-16 and 18-20 are currently under consideration. Amendment or cancellation of claims is not to be construed as a dedication to the public of any of the subject matter of the claims as previously presented.

The Examiner rejected all pending claims. Claims 1, 7, 9, 19 and 20 stand rejected under 35 USC § 102 as anticipated by Sako. Claim 18 stands rejected under 35 USC § 102 as anticipated by Blixt. The remaining claims are rejected citing in combination of Sako and Blixt under 35 USC § 103. Specifically the Examiner rejected Claim 16 and 17 (see Action, page 8) stating in pertinent part:

> Regarding claim 6, specifically, Blixt teaches prior to the inverting, the data has an incorrect or invalid value according to a predetermined ECMA standard (page 6, lines 29 through page 7, line 5). The reason the data is incorrect prior to inverting is because the data is being read from the optical medium, therefore the data is being read from the optical medium, therefore the data has already had the alterations performed.
>
> Regarding claim 17, specifically, Blixt teaches the recorded physical sectors have an incorrect or invalid value according to a predetermined ECMA standard (page 6, line 29 through page 7, line 5).

(It is believed the Examiner in rejecting Claim 17 should have perhaps also cited Blixt page 7, line 29 through page 8, line 6.)

With regard to the earlier claim amendments, the Examiner stated at page 11 of the Action that:

> Sako discloses a deciphering scheme which utilizes a key as is well known in the art. Ciphering and deciphering, with the use of a key, inverts selected bits of a data scheme. Although a user of the system does not know the exact bits that are inverted, the hardware performing the ciphering knows which bits to invert based on a key used. In other words, the ciphering scheme of Sako does disclose inverting at least one selected

bit by a process of ciphering "selected" bits from the discretion of the
key...

First, the Examiner is thanked for correcting the earlier filed Supplemental Information
Disclosure Statement as to the serial number.

This amendment is submitted after final rejection. It is respectfully submitted that under
Rule 116 it is entitled to entry because it incorporates into the claims subject matter previously
recited in previously pending claims, specifically Claims 16 and 17. The claims are further
amended here but is believed that since the Examiner has or should have previously considered the
amendatory subject matter (see detailed explanation below), he should be able to consider this
Amendment, enter it, and examine the amended claims without having to perform a new search.
Therefore this Amendment should be entered.

If the Examiner does not intend to enter this Amendment, please contact the undersigned
immediately.

As the Examiner understands, the decoding and encoding processes and apparatus in
accordance with the invention use a proprietary standard or format. This results in proprietary
format DVDs which may not be read or copied by a conventional DVD player. These decoding and
encoding processes result in relatively minor modifications (in some embodiments) to existing DVD
standards, thereby not conforming to existing standards. See specification at page 3, lines 10-15.
As pointed out in the specification at page 4, beginning line 13, the proprietary DVD format is in
one example derived by modification of primarily the ECMA-267 standard but similar
modifications may be made to other ECMA formats to create corresponding proprietary DVD
formats.

Therefore the present format is proprietary. Moreover the Examiner also understands this is
achieved by inverting bit values at predetermined locations in the data stream. As the Examiner
points out, ciphering does alter some bit values. The Examiner considers the locations of these bit
values to be "selected" because the ciphering key selects which bits to invert. In contrast, in

accordance with the present invention, the bit values that are modified are not determined by a ciphering key but are in predetermined bit locations which are known both to the encoding device and to the decoding device which looks only to those locations, rather than using a (changeable) key as in the Sako ciphering scheme. Hence in accordance with the present invention as set forth on page 5, beginning line 22:

> In one embodiment data frame encoding system 20 includes an encoder 22
> and an exclusive-OR gate 24. Encoder 22 determines which bits of the
> data frame 18 are to be modified. When a data bit is left to be unmodified,
> encoder 22 provides a low logic level signal to XOR 24, thereby allowing
> the data bit to pass through the XOR gate 24 unmodified.

See also page 6, beginning line 7:

> In one such modification, the sector number within the ID field is altered
> to prevent effective navigation of DVD 12 by a conventional DVD player.
> To accomplish this, data frame encoding system 20 may XOR the 24-bit
> sector number of each data frame with a 24-bit encoding byte ...
> Alternatively, simple inversion of every sector number bit may be
> sufficient ...

Therefore it can be seen that rather than using ciphering or a key, instead the precise location(s) of the inverted bits is predetermined and of course that location is specified both by the encoding device in the recorder and the corresponding decoding device in the player, thereby to reinvert the bit values at the predetermined locations. Note that "encoding" is not the same as enciphering in this context. Encoding can include a known predetermined modification; enciphering means a technique, used to provide data security.

Clearly this is different from Sako. Sako, like any ciphering scheme, does not operate on predetermined bit locations, but instead uses the key which may or may not invert the value of any particular bit location.

The Examiner cited Blixt in rejecting Claim 18 and also for the § 103 rejections. Blixt describes a copy protection method, see Blixt, page 10, line 20:

The encoder provides this source data to a compuater arrangement, which selectively alters synchronization and header information for at least some of the sectors of the CD-ROM to be recorded, as depicted at a block 402. At a block 404, the source data and the modified synchronization and header information are written to the CD-ROM. As depicted at a block 406, an authentication program is stored on the CD-ROM. The authentication program <u>allows use of user information stored on the CD-ROM only if it attempts to read particular portions of the CD-ROM for these read errors. Successfully reading</u> of particular portions indicates that the CD-ROM <u>does not contain the modified synchronization and header information</u> and is therefore <u>an unauthorized copy</u>. (Emphasis added.)

Further in Blixt at page 2, beginning at line 27:

The method includes rendering certain portions of the data storage medium unreadable by modifying selected address information used for reading the data storage medium.

Therefore in Blixt the unreadability (errors) in the data indicate the presence of an original CD-ROM. An error free CD-ROM is an illegal copy. This makes copying relatively difficult due to unreadability of portions of the original CD-ROM to be copied. Further, the CD-ROM includes an authentication program as set forth at Blixt page 8, beginning line 3:

After altering a small member of the synchronization and header sections, the manufacturer optionally stores an authentication program on a disc. The authentication program commands a CD-ROM drive to attempt to read the locations corresponding to the altered synchronization and header sections. <u>If the disc is an original, the CD-ROM drive will be unable to read the locations. By contrast, an unauthorized copy of an original disc does not contain the altered synchronization and header sections, and the CD-ROM drive will successfully read the locations.</u> Accordingly, the authentication program determines that the disc is an original and allows a user to use the disc if the CD-ROM cannot read the locations. Authenticating the CD-ROM as an original using an authentication program <u>allows any CD-ROM drive to authenticate the CD-ROM.</u> (Emphasis added.)

Thus the Blixt process works with a conventional ("any") CD-ROM drive and so is not a proprietary standard.

Note the reference in Blixt as quoted above to "any CD-ROM drive" means that the Blixt system is compatible with standard CD-ROM drives and is not a proprietary standard for CD-ROMs. Accordingly, there is no departure in Blixt from the conventional standard CD-ROM format. This is because the Blixt data containing the errors is not used as information content, but is merely used to identify an original disc due to its unreadability.

Therefore, the rejection of Claims 16 and 17 citing Blixt in conjunction with Sako is traversed. Clearly, neither reference, including Blixt, meets Claim 16 which says "The method of Claim 1, where prior to inverting, the data has an incorrect or invalid value according to a predetermined ECMA standard." In Blixt there may be errors but there is no indication that after an inverting the errors are absent. This is because the introduced errors in Blixt presumably extend over more than one bit, so inverting one bit will not necessarily correct the error. The same goes for (cancelled) Claim 17.

Each of the present independent claims have been amended and it is respectfully submitted, distinguish over even the combination of Sako and Blixt. Claim 9 directed to the method of recording as amended recites in the preamble "A method for recording data on an optical medium according to a proprietary format based on a predetermined format ECMA standard." (Emphasis added.) No such element is found in Blixt or Sako as pointed out above.

Further, the third clause of the body of Claim 9 now recites, "inverting at least one bit in a predetermined location in at least one of the data frame values ..." Additionally, added at the end of Claim 1 is "wherein at least one of the recorded physical sectors including the inverted bit has an incorrect or invalid according to the predetermined ECMA standard."

As pointed above, Claim 9 thereby clearly distinguishes over even the combination of Sako and Blixt. Claim 9 refers to "a predetermined location" for the inverted bit. As disclosed in Sako, the Sako method does not do bit inversion at a "predetermined location" but at what the Examiner regards as a "selected" bit (which is selected by the key) which of course can change based on the enciphering key. Moreover, even the key by itself does not predetermine what happens, in terms of

inversion at any particular bit location since that also depends on the length of the data, etc. Hence Claim 9 distinguishes over Sako for at least this second additional reason.

Moreover, Claim 9 also distinguishes over Blixt. As pointed above, Blixt adheres to the CD-ROM standard. Blixt provides erroneous blocks on the CD-ROM which in terms of information are ignored by the player. Hence there is no "proprietary format" in Blixt but instead Blixt adheres to the CD-ROM standard. In order words, Blixt does not require a compliant (especially adapted) or modified player but works with a standard player.

Third, Claim 9 distinguishes over Sako and Blixt by including the patentable subject matter of Claim 17, as pointed out above.

Hence Claim 9 clearly distinguishes over even the combination of the two cited references. Moreoever it is pointed out that subject matter of (cancelled) Claim 17 which recited "an incorrect or invalid value according to a predetermined ECMA standard" has now effectively been incorporated into Claim 9. The subject matter of Claim 17 was earlier examined by the Examiner. Hence there is no new issue raised by the present amendment to the last clause of Claim 9. The present amendment to Claim 9 referring to the "predetermined location," while not in these words earlier considered, was effectively subject to examination since the Examiner interpreted the term "selected" in terms of ciphering. None of the earlier pending claims recited the "proprietary format" now in the Claim 9 preamble. However, arguments made in the prior amendment in this case point to the use of the non-standard inverted bit and so the Examiner should have considered this issue earlier. Hence the Examiner is able to consider for instance amended Claim 9 without further searching and so this amendment is entitled entry.

The other independent claims have been amended somewhat similarly to Claim 9. Claim 19 is directed to a system for recording data and corresponds somewhat to the method of Claim 9. Claim 18 has similar amendments. Claims 1 and 20 are directed respectively to the method for reading and decoding data and a corresponding drive for reading and decoding data. Claims 1 and 20 have been amended somewhat similar to, for instance, Claim 9 but with different terms since

they are directed to decoding.

Thus all independent Claims 1, 18, 19, and 20 distinguish over the references at least for reasons similar to those as to pertain to Claim 9 and as discussed above.

Note that since the word "selected" referring to the bit was deleted from the independent claims, it is similarly deleted here by amendment from all claims dependent thereon, for antecedent basis purposes.

The specification is amended (at page 6) here only to improve grammar.

Therefore it is respectfully submitted that each of the independent claims is now allowable and at least for the same reasons so are the pending dependent claims.

## CONCLUSION

In view of the above, each of the presently pending Claims 1-16 and 18-20 in this application is believed to be in immediate condition for allowance. Further, this amendment is entitled to entry under Rule 116. Accordingly, the Examiner is respectfully requested to consider and enter this amendment, withdraw the outstanding rejection of the claims, and to pass this application to issue. If it is determined that a telephone interview would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket no. 136922002400. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Dated: January24, 2004                    Respectfully submitted,

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